

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A method for performing time measurements
2 during instrumentation-based profiling, comprising:
3 receiving a code to be profiled;
4 inserting profiling instrumentation code in the code;
5 ~~allowing a user to select at runtime the instrumented portions of the code~~
6 ~~to execute;~~
7 executing the code including the instrumented portions of the code;
8 measuring a time for executing instrumented portions of the code; and
9 subtracting an overhead time for the profiling instrumentation code from
10 the measured time to obtain the time for the instrumented portions of the code,
11 wherein the overhead time is determined by executing the profiling
12 instrumentation code without executing any instrumented code.
- 1 2. (Original) The method of claim 1, wherein the code includes platform-
2 independent Java bytecodes.
- 1 3. (Cancelled)
- 1 4. (Original) The method of claim 3, wherein the profiling instrumentation
2 code is executed multiple times to determine an average value for the overhead
3 time.

1 5. (Original) The method of claim 4, wherein the profiling instrumentation
2 code includes method entry code that takes a first time measurement at the
3 beginning of a method, and method exit code that takes a second time
4 measurement at the end of the method, wherein the first and second time
5 measurements are used to calculate an execution time for the method.

1 6. (Original) The method of claim 5, wherein determining the overhead
2 time involves calculating an inner time $t_I = x_2 + y_1$, wherein y_1 is the time between
3 when the first time measurement is taken and when the method entry code is
4 finished executing, and wherein x_2 is the time between when the method exit code
5 begins executing and when the second time measurement is taken.

1 7. (Original) The method of claim 6, wherein the time t_{exact} for executing
2 instrumented portions of the code is calculated as $t_{exact} = t_{meas} - t_I$.

1 8. (Original) The method of claim 7, wherein if the method makes m calls
2 to other methods, the time for executing instrumented portions of the code
3 $t_{exact} = t_{meas} - t_I - mt_O$, wherein the outer time, $t_O = x_1 + y_2$, wherein x_1 is the time
4 between when the method entry code begins executing and when the first time
5 measurement is taken, and wherein y_2 is the time between when the second time
6 measurement is taken and when the method exit code is finished executing.

1 9. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method for performing time measurements during instrumentation-based
4 profiling, wherein the computer-readable storage medium includes magnetic and
5 optical storage devices, disk drives, magnetic tape, CDs (compact discs), and
6 DVDs (digital versatile discs or digital video discs), the method comprising:

7 receiving a code to be profiled;
8 inserting profiling instrumentation code in the code;
9 ~~allowing a user to select at runtime the instrumented portions of the code~~
10 ~~to execute;~~
11 executing the code including the instrumented portions of the code;
12 measuring a time for executing instrumented portions of the code; and
13 subtracting an overhead time for the profiling instrumentation code from
14 the measured time to obtain the time for the instrumented portions of the code,
15 wherein the overhead time is determined by executing the profiling
16 instrumentation code without executing any instrumented code.

1 10. (Original) The computer-readable storage medium of claim 9, wherein
2 the code includes platform-independent Java bytecodes.

1 11. (Cancelled)

1 12. (Original) The computer-readable storage medium of claim 11,
2 wherein the profiling instrumentation code is executed multiple times to
3 determine an average value for the overhead time.

1 13. (Original) The computer-readable storage medium of claim 12,
2 wherein the profiling instrumentation code includes method entry code that takes
3 a first time measurement at the beginning of a method, and method exit code that
4 takes a second time measurement at the end of the method, wherein the first and
5 second time measurements are used to calculate an execution time for the method.

1 14. (Original) The computer-readable storage medium of claim 13,
2 wherein determining the overhead time involves calculating an inner time $t_I = x_2 +$

3 y_1 , wherein y_1 is the time between when the first time measurement is taken and
4 when the method entry code is finished executing, and wherein x_2 is the time
5 between when the method exit code begins executing and when the second time
6 measurement is taken.

1 15. (Original) The computer-readable storage medium of claim 14,
2 wherein the time t_{exact} for executing instrumented portions of the code is
3 calculated as $t_{exact} = t_{meas} - t_I$.

1 16. (Original) The computer-readable storage medium of claim 15,
2 wherein if the method makes m calls to other methods, the time for executing
3 instrumented portions of the code $t_{exact} = t_{meas} - t_I - mt_O$, wherein the outer time,
4 $t_O = x_1 + y_2$, wherein x_1 is the time between when the method entry code begins
5 executing and when the first time measurement is taken, and wherein y_2 is the
6 time between when the second time measurement is taken and when the method
7 exit code is finished executing.

1 17-24 (Canceled).